

### **REMARKS**

This Amendment and Response is in reply to the Office Action of October 16, 2008. A two (2) month Petition For Extension of Time is filed concurrently herewith. Therefore, the time period for reply extends up to and includes March 16, 2009. Applicant wishes to thank the Examiner for careful review and consideration of the present application.

Applicant has amended claims 1, 6, 13, 14, 17, 20-22, 24, 25, 27, and 31. Claims 2, 3, 26 and 28 have been cancelled without prejudice or disclaimer. New claim 34 has been added. Support for the amended claims can be found in the specification, drawings, and claims as originally filed (e.g., paragraphs [20], [21] and [62] of the present application). Claim 24 generally incorporates the subject matter of cancelled claim 26, while claim 27 generally incorporates the subject matter of cancelled claim 28. Support for new claim 34 can be found at least in paragraph [87] of the present application. Claims 1, 4, 6-14, 16-22, 24, 25, 27, 29-31 and 34 remain pending in the application.

### **Claim Rejections Under 35 USC § 102**

On page 2 of the Office Action, claims 1-4, 6-14, 16-22 and 24-31 are rejected under 35 U.S.C. § 102(b) as being anticipated by Skopec et al. ("Horizontal Core Acquisition and Orientation for Formation Evaluation"). Applicant respectfully traverses the rejection.

As a first matter, it is noted that claims 2, 3, 26, and 28 have been cancelled above without prejudice or disclaimer. Accordingly, the rejection with respect to those claims is now moot.

### **Claims 1, 4, 6-12**

Claim 1 is directed to a core orientation device for a core drill. Claim 1 recites, in part, means for maintaining a rotational orientation of a core drilled by the core drill stationary with respect to the rotational orientation of the core orientation device. This is generally described in the present application at paragraph [62] and several advantages result from this feature. More specifically, because the core orientation device is stationary with respect to the core, cumbersome scribing systems are not necessary. In addition, a process that aligns scribe knives to the core orientation device is not necessary.

In contrast, Skopec et al. discloses a scribing system that marks the core as the core enters the inner barrel of the core drilling device. In Skopec et al. an EMI tool is positively aligned to the principal scribe knife in the core head. The principal scribe knife is used as the frame of reference for all subsequent frame measurements. A Laser Alignment System (LAS) maintains the alignment between the EMI tool and the principal scribe knife. See pages 11-12 of Skopec et al. The EMI tool continuously registers the orientation of each mark made on the core due to the EMI tool being aligned with the principal scribe knife.

Table 2 documents core groove rotation during the drilling process. Groove rotation is due to the rotation of the core with respect to the scribe knife. Table 2 documents how the core rotates with respect to the principle scribe knife (and therefore with respect to the core orientation device – the EMI tool that is aligned to the principal scribe knife). Because in Skopec et al. the core rotates with respect to the core orientation device, the core orientation device is not stationary with respect to the core. Therefore, Skopec et al. does not disclose and/or teach means for maintaining a rotational orientation of a core drilled by the core drill stationary with respect to the rotational orientation of the core orientation device, as recited in claim 1 of the present application.

For at least these reasons, claim 1 is allowable over Skopec et al. Since claim 4 and claims 6-12 depend either directly or indirectly from claim 1, claim 4 and claims 6-12 are also allowable.

#### Claims 13, 14 and 16-19

Claim 13 recites, in part, means for maintaining a rotational orientation of a core drilled by the core drill stationary with respect to the rotational orientation of the core orientation device. As discussed above, Skopec et al. does not disclose and/or teach maintaining a rotational orientation of a core drilled by the core drill stationary with respect to the rotational orientation of the core orientation device. For at least this reason, claim 13 is allowable over Skopec et al. Since claims 14 and 16-19 depend either directly or indirectly from claim 13, such claims are also allowable over Skopec et al.

#### Claims 20-22

Claim 20 recites, in part, maintaining a physical orientation of the core stationary with respect to a physical orientation of the core orientation device. As discussed above, Skopec et al.

does not disclose and/or teach maintaining a rotational orientation of a core drilled by the core drill stationary with respect to the rotational orientation of the core orientation device. A rotational orientation of a core is an example of a physical orientation of a core. Therefore, Skopec et al. does not disclose and/or teach maintaining a physical orientation of the core stationary with respect to a physical orientation of the core orientation device -- as recited in claim 20. For at least this reason, claim 20 is allowable over the Skopec et al. Since claims 21 and 22 depend from claim 20, claims 21 and 22 are also allowable.

Claims 24, 25 and 29

Claim 24 recites, in part, means for maintaining the rotational orientation of the core stationary with respect to a rotational orientation of the orientation device. As discussed above, Skopec et al. does not disclose and/or teach means for maintaining the rotational orientation of the core stationary with respect to a rotational orientation of the orientation device. For at least this reason, claim 24 is allowable over Skopec et al. Since claims 25 and 29 depend from claim 24, claims 25 and 29 are also allowable.

Claims 27 and 30

Claim 27 recites, in part, means for maintaining the rotational orientation of the core stationary with respect to a rotational orientation of the orientation device. As discussed above, Skopec et al. does not disclose and/or teach means for maintaining the rotational orientation of the core stationary with respect to a rotational orientation of the orientation device. For at least this reason, claim 27 is allowable over Skopec et al. Since claim 30 depends from claim 27, claim 30 is also allowable.

Claim 31

Claim 31 recites, in part, drilling a core from a body of material with a core drill having an inner tube assembly adapted to receive the core and maintaining the rotational orientation of the core stationary with respect to a rotational orientation of the inner tube assembly. As discussed above, Skopec et al. does not disclose and/or teach means for maintaining the rotational orientation of the core stationary with respect to a rotational orientation of the orientation device. Skopec et al. also does not disclose or teach maintaining the rotational orientation of the core stationary with respect to a rotational orientation of an inner tube assembly. For at least this reason, claim 31 is allowable over Skopec et al.

In view of the foregoing, reconsideration and withdrawal of the §102(b) rejection is requested. Applicant does not otherwise concede the correctness of the rejection and reserves the right to make additional arguments as may be necessary.

**New Claim 34**

Applicant believes that new claim 34 recites patentable subject matter. Consideration and allowance is requested.

**Conclusion**

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.



Dated: 16 March 2009

BHB/BR

Respectfully submitted,

MERCHANT & GOULD P.C.  
P.O. Box 2903  
Minneapolis, Minnesota 55402-0903  
(612) 332-5300

By: 2-M 7

Brian H. Batzli  
Reg. No. 32,960